Regarding the matter of inquiry into Broadband over Power Line systems :

The proposed system for BPL raises serious concerns regarding the potential for interference to both licensed and unlicensed services operating both in the 2 to 80 mHz spectrum as well as harmonically related VHF, UHF and microwave frequencies. Use of existing above-ground power lines as radio frequency transmission lines was never anticipated, and their design does not accomodate efficient RF transmission. In fact, such power line design more closely resembles an antenna intended to radiate RF energy at these frequencies. Because radiofrequency emissions in this range are known to propogate via ionospheric reflection, such interference could extend well beyond US borders and possibly run afoul of international treaty regarding radio emissions in the 2 to 30 mHz band.

Another possible consequence of the proposed BPL system concerns interference to other services using VHF, UHF and microwave communication. Although the proposed BPL system operates in the 2 to 80 mHz spectrum, harmonics of these frequencies extending to VHF, UHF and microwave are likely to exist and to be radiated by the system. This harmonic radiation could impact many users of this spectrum, including but not limited to police and fire departments, cellular telephone users, aircraft navigation and communication systems, military, satellite and others. Many of these systems rely on a low noise background so that they may effectively employ low power communications.

Finally, the use of lines dedicated to the purpose of power distribution for any additional service seems unwise due to the potential of compromising their primary and more important role. The reliability of the power grid is of paramount imortance, and any secondary use which could reduce the reliability or safety of this existing system should be very closely scrutinized. In short, the proposed BPL system seems to require very careful analysis prior to deployment.

Sincerely

Daniel L. G. Pitts
KG4KRI amateur extra class